

## SECTION I—SPECIFICATION AMENDMENTS

Please replace the specified paragraphs in the specification with the amended paragraphs shown in marked-up form below:

**1. *Please replace the paragraph beginning at page 1, line 8, with the following amended paragraph:***

Data centers are facilities designed to house large amounts of electronic equipment—including devices such as computers, servers and routers—in a central location. Data centers are vital nodes in information superhighway. Data centers are designed to not only provide all the servers, storage systems and networking infrastructure required to support incoming data requests, but to also provide services such as: authentication, security, and RAS (reliability availability serviceability) management. Most often, data centers are large rooms that are closed off and heavily air-conditioned to maintain a suitable operating temperature for the equipment housed there. The rooms typically have racks where the data communication and processing equipment is installed. While there are many benefits to having all the equipment in one place—such as easier access and maintenance—data centers are costly to build and operate. Because of the high cost involved, space in a data center is at a premium, and data center facility managers try to squeeze as much equipment as possible into every data center. To do so, however, data center managers must have an accurate way of assessing the power consumption and cooling requirement of each component housed in the data center. For a data center, power and cooling are ~~virtually synonymous~~ closely related, since a large portion of the electrical power consumed by a device usually ends up converted into thermal energy.

**2. *Please replace the paragraph beginning at page 5, line 4, with the following amended paragraph:***

Each rack 12 has both physical limits and power/cooling limits. The physical limits are relate to the number of openings 16 in the rack; in Figure 1B, the rack 12 can accommodate five devices, although other racks may be able to accommodate more or less devices. The power/cooling limits relate to the amount of power that can be delivered to the rack, and the amount of cooling air that can be delivered to the rack from underneath the raised floor 14. Power and cooling limits are ~~virtually synonymous~~ closely related, since most of the power delivered to the device as electrical energy ends up being converted into thermal energy. For example, the rack 12 may have a physical limit of five devices as shown, while having a

maximum power capacity of 2000 W, meaning that the total power consumption of all devices in the rack must be less than or equal to 2000 watts. In some cases, the rack may encounter its power and cooling limits before it encounters its physical limits, meaning that the total power allocation of the rack is used up before its physical space is. This results in wasted space, which is a disadvantage in application such as data center where space is at a premium.

**3. *Please replace the abstract on page 19 with the following amended abstract:***

A method is described for computing the power consumption of a device. The method comprises (1) determining the number and type of each of a plurality of components comprising a system, (2) determining a component power consumption for each of the plurality of components, and (3) determining a device power consumption by summing the component power consumptions of all of the plurality of components. A rack holds multiple systems, provides power to the systems and cool air to remove thermal energy from the systems. Power and cooling requirements for a rack are determined by (1) determining the number and type of components comprising each of the plurality of systems, (2) determining component power consumption for each of the plurality of components, (3) determining a system power consumption for each system by summing the component power consumptions of all components in each system, and (4) determining a rack power consumption by summing the system power consumptions for all systems. Other embodiments are described and claimed.

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